## APPENDIX A

BENCHMARK CHARACTERISTIC ANALYSIS OF DATA FROM FIXED STATIONS IN THE ST. JOSEPH-LAKE MICHIGAN WATERSHED 1991 TO 1997

۔	<u>.s.</u>	=	Ξ	9	=	=	=	*	=	<u>*</u>		-	=	22	Ξ				ω <sub></sub>	<b>4</b>	¥	4
Std.Err	Kurtosis	0.54821	0 54821	0 758719	0 548211	0.548211	0.54821	0.544804	0.54821	0.54480			0 548211	0.555223	0.54821		0.61125	77.00	0 618136	0.544804	0.544804	0 54480
	Kurtosis	3.770018	74.84335	2.697506	74.95746	73,66611	0.734378	75.59324	71.46768	71,90381			74 9637	47.30087	2 085309		77577	100.0	4.189751	5,306548	19.63231	9.058143
Std.Err.	Skewness	0.2774	0.2774	0.387589	0.2774	0.2774	0.2774	0.275637	0.2774	0.275637			0.2774	0.281029	0 2774		244476		0.31372	0.275637	0.275637	0 275637
		0.24734	8 646941	1 557531	9 656626	8.549928	-0 3255	8.683612	350087	3 374726			8.65716	6.680121	161404		903790	0607007	-1.70384	2.390179	831406	002278
Standard				0.218587	52.0773	000374	0 068552	0.167637	34.93178	7,705118 (			3.323376	2347.115 6		37.5	•	-	0.039868	0.152541	65,66449	0 497256 2
		• •		1 329612 0	537,6052	0 003239 0	0.593679 0		302.5181 3	57.17165 7			8.78128 3	20053.76 2	V VCVV3 C	53 03303	10220	220400		1.32982 0	72.4498 6	334981 0
	/ariance S	06.8912 2		767868 1	289019.4 5	1E-05 0	352455 0		11517.18 3	1512.03 6			828.3619 2			A 40 40 C	0 00000	440100 1	09219 0	1.768421 1	w,	8 79206 4
Quartile	Range \		-					0 045 2	٠.	₽		_	.05		- 4		-			0		-
-	Range	196	25 95	56	4666 9	0.028	3 35	12.785	2787	588		-	249 7	154790	910	. v		0	163.	9	3990	27 75
Upper	Quartile	241	0	19	54	0 005	2.4	0.085	407	15		-	-	760	317	:	-	Ξ	8 18	8	575	5
Lower	Quartile	210	0 05	9.0	=	0 005	1.6	0.04	369	ĸ		-	0 5	001	258	)		20	7.9	7	285	10
-	Maximum	345	56	6.1	4673	0.033	3.4	12.8	2970	290	-	21	250	154800	-	<u> </u>	,	* ? -	8.45	60	4100	8
-	Minimum	149	0 05	0 5	6 1	0.005	0.05	0.015	183	7	-	21	03	5	;	7 9	2 6	60 \	6 82	7	110	2 25
-	Sum	16898	333	58.7	5992.9	0.408	150 25	18 5	31114	1501	-	21	307.41	297332	7000	10017	= ;	282	464 29	196 8	41950	563 3
-	Median	230	0 05	1.5	15.6	0.005	~	0 05	394	o		-	90	340	;	300	22.2	10.16	8 035	~	370	8.
Confid	<b>*95 000%</b>	231 8423	1.132473	2.029801	203,5971	0.006185	2 139927	0.577371	484 4564	35.09938			10.72077	8751.929	:	294 9316	531.9827	10 33979	8 084835	2 893351	582 7841	8.402428
Confid	95.000%	218.7711	-0.24447 1.132473	1.143172	43,7864 203,5971	0.004695	1.86674	-0.09053	345,2502 484,4564	1.400621			.2 52317	073.041 -605.847 8751.929		275,3084, 294,9316	420.983	524617	1 925165	785597	121 1633	3 421257
	Mean	_	0.444	1,586486	79 90533	0.00544	2 003333	0 243421	414.8533	19.75		73	4 0988	4073.041		285.12	55.5	9 932203	2005	589474	561 9737	7,411842 6 421257 8,402428
	Valid	75	75	37	75	75	22	92	75	92	0	-	75	23	<b>o</b> ¦	ę,	2	29	58	92	78	92
tation: SJR-87		Altaliation (Moon)	Ammonia (mod as N)		(Man) 000	Consider (Man)	Name (mg/l)	Total Discoposes (mol) as D)	Total Colle (mg/ est)	Suspended Solids (mg/l)	Dissolved Solids (ma/l)	Suffete (mod)	TKN (mal as N)	E. coli (CFU/100ml)	TOC (mg/l)	Hardness (mg/l)	Chloride (mg/l)	Dissolved Oxygen (mg/l)			Copper (ug/n)	Zinc (ug/l)

-	ٺ	Š.	=	Ξ	z	=	-	=	_	<u>-</u>	_			-	<u>.</u>		-		ڥ	9	g	t	
Č	Std Err	Kurtosis	0.55883	0.55883	0 77779	0 55883	0.56251	0.55883	0.55883	0.55883	0.56251				22.30207 0.558831		0000		-0.84701 0 628256	0.62825	1.279416	22044	114341 0 00000/ 2 000004 12/9410
		Kurtosis	7.30373	3.66952	3.891352	569289	46.7458	874668	3.25468	5 20453	9 66708				30207	070370	1 100 10		84701	,60028	0.427431	70000	10000
į	F.		0.282898 17	0 282898 13	٠,	0.282898 1.8	284805 46	282898 1.8	282898 13	282898 15	284805 19				898 22					••		600	7 /00
č	Std.Err	ss Skewness			9 0 397694	_	0	0	0	0	0				3 0.282898	000	-2.05413 U 202030			2 0.319	4 0 660687	000	-
		Skewness	-3.10405	3.310917	1.769789	1 202755	6 703714	0.889501	2.813683	-2.55723	3.582702				4.09863	2000	*00.7-		0.057537	-1.25182	1.410374	,,,,,,	4.4
	Standard	Error	193189	0 006851	0.159082	0.567584	3.1E-05	0.070301	0.004211	302378	374725				189.992	9000	3.40220	4.	0.217517	0.03981	0.337712	90,000	ZZ UZ641 4 093443   413120
C	•	Std Dev.	8.60982 2	0.058136 0	0 941142 0	816111 0	0 000264 3	0.596521 0.	0.035731 0.	28.02161 3	11.58364 1.				1612.135 1		6 7104667			297912 0.	120065 0		2440
			_	_		*	-	_		•••	-									0	•		, 0
		Variance		0.00338	0 885748	23.19493	7E-08	0 355837	0.001277	785.2105	134 1807				2598980	07.72	01.50.670		2 649564	0 088752	1 254545	6	75 028
:	Quartile	Range	17.5	0 05	0.7	5.95	0	6.0	0.03	19.5	10			-	670	,	22.2		2 775	03	7		
	-	Range	145	0.35	4.3	23 3	0.002	3.6	0.245	228	82			-	10999 5		5	-	6 52	16	'n		17 75
-	Opper	Quartile	216	0	17	19.8	0.005	2.2	0.07	370	16				705	-	781		-168	8 2	4		
-	Lower	Quartile	198.5	0.05	-	13.85	0 005	1,3	0.04	350.5	9			-	35	, , ,	6 667	- !	8 905	7 9	7		n
		Maximum	239	•	<b>4</b>	34.3	0.007	1.	0.26	425	84			12	11000	000	900	/2	13.44	8 55	s	8	R
		Minimum	<del>5</del> 6	0.05	0.5	=	0 005	0.5	0.015	197	7		-	1 2	5 0		33	27	6 92	6 95	7	į	2 25
	-	Sun	14752	5 45	52.1	1256.5	0.358	128	4.3	25850	918		-	12	58465.5	0,00	18942	27	569.59	450 08	53	;	62.76
		Median	506	0.05	13		0 005		0.05	٠,	Ξ		-		205		270		10 125	8 08	7		2
	Confid	95.000%	209.262	089356	811865	3.58312	005105	1,777778 1.637602 1.917953	068119	365.6125	6.67138				90.854	:	0.0268		60716	116924	388833		99401
	Confid	Mean -95.000% +95.000%	5158 2	075694 0.062033 0.089356	5278 1.	1966 18	0 498	7602 1	1326 0.	352.443 36	10,18777 15,67138				812.0208 433.1876 1190.854		263,0833 256,1399 270,0268		10.17125 9.735336 10.60716	037143 7 957361 8 116924	636364 1.883894 3.388833		8 840909 5 687811 11 99401
	ပိ	.95.	04.8889 200.5158	94 0.06	71 1.16	39 16.3	42 0.00	78 1.63	22 0.05	78 352	10.1				38 433		33 256		25 9.73	13 7 95	34 1.88		9 5 68
		Mea	204.88	0.0756	1.4885	17.451	0.0050	1,7777	0.0597	359.0278	12.92958			1.2	812.02		263.08	27	10.171	8 0371	2 6363		8 8409
		Valid N	72	72	35	72	7	72	72	72	71	0	0	-	27	o ;	7.5	-	20	26	Ξ	0	=
Station: SJR-64			Alkalinity (mg/l)	Ammonia (mo/l as N)	BOD (ma/l)	(/siii) (OO)	(vanide (mo/l)	Airrate (no/ as N)	otal Phosphorus (ma/las P)	tal Solids (ma/l)	Suspended Solids (mg/l)	ssolved Solids (mg/l)	Sulfate (mg/l)	IKN (mg/l as N)	E. coff (CFU/100ml)	TOC (mg/l)	fardness (mg/l)	Chloride (mg/l)	Dissolved Oxygen (mg/l)		Copper (ug/l)	Iron (ug/l)	Zinc (ug/l)
ช			¥	₹	ă	ເັ	Ó	ž	٩	4	ร	ă	Su	ř	щi	₽	£	ົວ	ă	Ŧ	ပိ	으	Zic

Station SJR-51					-					-									-
	-		Confid	Confid		-			Lower	Upper	-	hartile		S	Standard	•,	Std.Err.	U)	Std.Err.
	Valid N	Mean	-95,000% +95,000%	*000.56+	Median		Minimum N	Maximum C	Quartile (	Quartile	•	Range	Variance	Std.Dev.	Error	Skewness SI	ø	Kurtosis K	Kurtosis
Alkalinity (mg/l)	92	214.2895	14,2895 208,6178 219 9612	219 9612	216.5		46		206	227 5		21.5	616.0484	24.82032 2	847086	4.2662 0	0.275637 2	27.80346 0	0.544804
Ammonia (mg/l as N)	92	0.140132	140132 0 109758 0 170505	0.170505	0.1	10 65	0.05		0 05	0 2		0 15	0 017668 (	0.132921 0	015247 2	2,129338 0	0 275637 4	917985 0	544804
BOD (ma/l)	35	2.285714	285714 1.661575 2.909854	2.909854	1.7	80	0.5		4	2.7		13	3 301261	٠	•		•	428435 0	777794
COD (ma/l)	9/	18.28947	8.28947 16.97655 19.6024	19.6024	<b>6</b>	1390	9		<b>=</b>	20.6			33.01189	745597 0	659065 0	0.785946 0	0 275637 0	0 357616 0	544804
Cvanide (mo/l)	4	0.005176	005176 0 004802 0 005551	0.005551	0.005	0 088	0 005	800.0	0 005	0.005	0 003	0	_	0 000728 0	0.000176 4	123106 0	0.549747	17 1	063198
Nitrate (mo/las N)	9/	2.796053	796053 1 589357 4 002748	4.002748	2.15	212.5	6.0		1.9	2.5	47.1	9.0	27.88598	5 280718 0	0.60574 8	584864 0.	0.275637 7	4.43462 0	544804
Total Phosphorus (mg/l as P)	92	0.132895	132895 0.116686 0.149104	0.149104	0.11	10.1	0.04		60 0	0.16	0 36	0.07	0.005032 0	0.070933 0.	008137 1	658014 0	0.275637 3.	3.065471 0 (	544804
Total Solids (mg/l)	9/	429.5789	29.5789 420.0036	439,1543	432	32648	351		405	459.5	242	54.5	1755.9	11.90346 4	806657 0	495066 0.	1.275637 1.	794675 0.5	544804
Suspended Solids (mg/l)	9/	12,73684	9.554645	15.91904	Ξ	896	7		2	15.5	93	105	193 9298 1	13.92587 1	597407 3	903926 0	0.275637 1	9.15529 0.	544804
Dissolved Solids (mg/l)	0																		
Sulfate (mg/l)	0				-	-	-	-	-		-	-							-
TKN (ma/as N)	92	0.8775	0.8775 0.823055 0.931945	0 931945	80	69 99	0 3	1.7	0 7		· •	03	_	0.238261 0	0 02733 1	018966 0	0.275637 1	858689 0.5	0.544804
E. coff (CFU/100ml)	9/	4761,118	1761,118 763,3733 8758,863	8758.863	875	361845	· •	120400	8	1850	20395	1450	3.1E+08 1	7494.85 20	2006.797 \$	5,366044 0.	0.275637 30	30.04485 0 5	544804
TOC (ma/l)	0					-	-	-	-	-	-	-							
Hardness (mo/l)	92	281.7368	276.2839	287,1898	283 5	21412	194	336	271	299	142	28	69 4498 2	23 86315 2	2 737291 -(	0.95411 0.	3.275637 2.	2.036472 0.5	544804
Chloride (mad)	75	46.69333	16.69333 43,89201 49,49466	49,49466	48	3502	19	99	0	25	47	17	148 2425 1	12.17549 1	405904 -(	0.63014 0	0.2774 -0	0.36099 0.5	548211
Dissolved Oxygen (mg/l)	58	9.971897	9.53567	10.40812	10.05	578 37	63	13 72	9 6	11.25	7 42	2 65 2	752461 1	659054 0	0 217845 0	0.214737 0.		-0.47458 0 6	618136
Ho	57	7 894035	894035 7.813368 7.974702	7.974702	7.94	149 96	6 84	8.43	7 75	8 08	1 59	0 33	092428 (	0.30402 0	0 040268 -(	0.80979 0	0.316327 1	589012 0 6	623134
Copper (up/l)	76	2 947368	2 542199 3.352538	3.352538	8	224	7	61	7	•	,	~	3.14386 1	773093 0	0.203388 1	879854 0	275637 2	2.606484 0.5	544804
Iron (ua/l)	76	534.3421	418,9549 649,7293	649.7293	400	40610	140	3500	295	555	3360	260 2	54979.6	504.955 57	57.92231 3	805372 0	275637 17	7.61803 0 5	544804
Zinc (ug/l)	9,2	20.03026 9	9 192548 3	30.86798	2	1522 3	s	420	5	20	415	10	4	7.42779 5	440341 8	220294 0	275637 69	69 94763 0.5	544804

	-			-	_	<b>.</b>	_		_	_	_	_		-	_	_		_		~	ç	œ		
		Std Err.	Kurtosis	0.548211	0.548211					0.548211	0	0 548211			0 548211	0.558831		0.54821		-0.97588 0.613257	2.173917 0.618136	1.334249	0 64442	
			(urtosis	1.460309	74.36629	2.691662	0.48658	10.31436	9.419992	72.46976	2.742184	28.47415			63 78051	70.11425		3,001459 0,54821		-0.97588	2.173917	2.53126	684771	
		Std.En.	kewness !	0.2774	0.2774	0.397694	0.2774		-	0.2774	0.2774	0.2774			0.2774			0.2774			0.31372	0.687043	327446	
		S	Skewness Skewness Kurtosis	0.440735	8.606614	1613751 0			2.515555	8.447445	0.312889	4 708888			713924	325242 0	1	-1.36469		0.15569 0	1.11345	641004 0	208186 0	
		Standard	Error Sk	2.932274 0.	0.158909 8	70421	0.895267			0.069881 8	1.829338 0.3	3.748337 4			0.181219 7.713924	2148.749 8.325242 0.282898				0.224258 0	0.040896 -1	024695 1.0	43 35494 6 584447 0 904443 2 208186 0 327446 7 684771	
		••	Std.Dev. Em		1.376192 0.1	599832 0.2	753238 0.8			0.605189 0.0	41,8233 4.8	32,46155 3.7			569401 0.1	18232.74 21				722558 0.2	0.311456 0.0	3.24037 1.0	4447 09	
						-		0							_	-						10.5 3.2	5.5	;
			Variance	644.8674	1.893904	2.559462	60.1127	1.09E-06		0.366254	1749.188	1053 752			0.44 2.463021	845 3.32E+08		1269.01	Ξ	2.9672	0 097005	¥	43 354	
		Quartile	Range	39	0.15	7	10.8	0	7	0.07	42	18			0.44	845		44		e	0.28	e	ď	,
		_	Range	147	11,95	6.7	35	0.005	8.55	5.27	566	239			137	54799.5	1	202	84	6.21	1 57	₽.	37.75	
		Upper	Quartile R	241	0.2	5.9	25.8	0.005	5.6	0.13	435	52			=	915 1	;	314		11.36	8 11	2	0	!
		ower Up			0.05	0.5	5	0.005	1.5	90:0	393	7			99 0	2	į	270		8.36	7.83	7	u.	,
		٥	Minimum Maximum Quartile	318	12	7.2	43	0.01	9.6	5.3	252	241		43	7	154800	;	340	75	13.41	8.5	12	40	ř
			num May	171	0.05	0.5	60	900	0.05	0.03	286	7		£3	0.3	0.5		138	22	7.2	6.93	7	2.25	3
			Minir	4	ñ	80	7	_		_	_	2		67	9	2		<u>.</u>	2	6	_	ç		,
			Sum			29	1530	0.28	168.9	12.84	3105	163		4	82.56	230835		21489	5	590.8	461.2	45	,014	5
			Median	223	0.05	7	€	0.005	1.9	0.07	450	12			0.8	280		292	2	101	7 99	4	\$	2
×		Confid	8	227 096	0.5813	2 486704	22.18652	0.005619	2.54284	3310441	123.7427	29.22873			461886	7490.532		294.7161	355,9489	10.46297	8.03379	6.818021	44600	1.44003
		Confid	8	215 4106	-0.05197	387581	•		962493	_	-				739714	-1078.43		78.3239	253.949				000	01529 11.44509
		č	•	533		-	_	0	-	0	•	_		5	0	•		286.52 27	•	6	~	~	•	-
			Mean	75 221 2533	75 0 264667	5 1 93714	5 20 40	54 0.005333	5 2.252	5	5	5 2176	0	_	-	72 3206.049		28	~	1001	8 7 951	10 4.5	9	53 9.630189
			Valid N Mean		- 7	35	. <del>د</del>			7	. 7.		_		7.	12	_	7,	••	ŭ,	, iči	, <del>~</del>	~ ;	ń
					. 5	•				mo/las P	, ,	Suspended Solids (mg/l)	()/6			_				()/0				
	R-3			(/04	70/10			(/00/	N SE IV	, sibodo	(man)	Solids	Solids (n	Ş	N N	U/100ml		(I/bu	90	, neuvac	100	Ę		
	Station: ER-3			(hom) which	namenty (	/pm/ CC	COD (ma/l)	n apide	trate (mo	Phoe	Solid Solid	Ispended	ssolved	(hate (ma/l)	N (mo.)	E. coli (CFU/100ml)	C (mg/l)	ardness (	nloride (n	Penloss		Copper (ug/!)	ron (ug/l)	inc (ug/l)
	ű			4	< ₹	Č	č	ó	Ž	Ė	-	ં જ	ā	ű.	ŕ	L L	ĭ	Ï	2	2	, 2	ĭŎ	≓ i	7

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# APPENDIX B

ST. JOSEPH-LAKE MICHIGAN WATERS ASSESSED IN THE
CLEAN WATER ACT SECTION 305(B) REPORT
1996 TO 1998

Waters assessed, status of designated use support, probable causes of impairment, and miles affected in the Lake Michigan Basin-Northeast Table 27.

WATERBODY	NEAREST TOW N(S)	STATUS OF DESIGNATED USE SUPPORT1	METHOD OF ASSESSMENT 2	PROBABLE CAUSE OF IMPAIRMENT	MILES AFFECTED	COMMENTS
Turkey Creek	Lake Village	FS(Aquatic Life) FS(Recreational)	Monitored (c)		9.0	
Turkey Creek	Syracuse	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	7.0	
Turkey Creek	Milford	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	9.3	High suspended solids as results of algae bloom.
Turkey Creek	Milford	FS(Aquatic Life) FS(Recreational)	Monitored (c)		3.0	
Skinner Ditch	Syracuse	FS(Aquatic Life) FS(Recreational)	Monitored (c)		.8. 8.	Ditch choked with lily pads and heavy algae. Limited access.
Coppes Ditch (Lower reach)	Leesburg Milford	NS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli Sewage Discharge	1.5	
Coppes Ditch	Leesburg Milford	FS(Aquatic Life) FS(Recreutional)	Monitored (c)		. S. S.	
Hoopingamer Ditch	Milford	FS(Aquatic Life) FS(Recreational)	Monitored (c)	:	£,\$	
Preston Miles Ditch	Milford Junction	FS(Aquatic Life)	Evaluated		4.2	
Kiefer Ditch	Milford Junction	FS(Aquatic Life)	Evaluated		6.1	
Dausman Ditch	Milford	FS(Aquatic Life)	Monitored (c) (b)		.08	Biological Assessment "Fair".
Swoveland Ditch	New Paris	FS(Aquatic Life) FS(Recreational)	Evaluated		7.0	
Wisler Ditch and Tributaries	Wakarusa	FS(Aquatic Life) NS(Recreational)	Monitored (¢)	R. coli	17.8	
Wemtz Ditch	Wakarusa	PS(Aquatic Life)	Monitored (c)		4.0	Lack of dilution water for Wakarusa STP lagoon waters. Stream also impacted by cattle operations. Limited use stream.
Grimes/Barkley Ditches	Wakarusa	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	25.0	Recreational uses impaired due to nearby cattle operations.

Water assessed, status of designated use support, probable causes of impairment, and miles affected in the Lake Michigan Basin -Northeast (cont.) Table 27.

WATERBODY	NEAREST TOWN(S)	STATUS OF DESIGNATED HISE SHIPPORTI	METHOD OF ASSESSMENT 2	PROBABLE CAUSE OF IMPAIRMENT	MILES AFFECTED	COMMENTS
Baugo Creek	Wakurasa	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	01	
Baugo Creek	Jamestown	FS(Aquatic Life) FS(Recreational)	Monitored (c)		5.7	
Uhl Ditch	South Milford	FS(Aquatic Life) FS(Recreational)	Monitored (c)		7.5	
Little Elkhart Creek	South Milford	FS(Aquatic Life) FS(Recreational)	Monitored (c)		0.3	
Little Elkhart Creek	South Milford	FS(Aquatic Life) FS(Recreational)	Monitored (c)		2.2	
Little Elkhart Creek	South Milford	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	1.5	
Little Elkhart Creek	Wolcottville	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	2.6	
Little Elkhart Creek	Wolcotville	FS(Aquatic Life) (Threatened) NS(Recreational)	Monitored (c)	E. coli	0.7	Wolcottville STP should be upgraded to alleviate treatment problems.
Little Elkhart River and tributaries	Topeka Middlebury	FS(Aquatic Life) NS(Recreational)	Monitored O	E. coli	30.0	Farm areas, Middlebury STP impact stream.
Tributary from Blackman Lake including trib from unnamed pond to Adams Lake	South Milford	FS(Aquatic Life) FS(Recreational)	Monitored (c)		3.2	
Bixler Lake Ditch	Kendallville	FS(Aquatic Life) iS(Recreational)	Monitored (c)		2.0	Cadmium slightly high but not affecting water quality.
Henderson Lake Ditch	Kendallville	FS(Aquatic Life) NS(Recreational)	Monitored (c)	<u>E. coli</u>	1.96	
Tributary to Round Lake	Kendallville	FS(Aquatic Life) FS(Recreational)	Monitored (c)		1.9	

Water assessed, status of designated use support, probable causes of impairment, and miles affected in the Lake Michigan Basin -Northeast (cont.) Table 27.

WATERBODY	NEAREST TOWN(S)	STATUS OF DESIGNATED USE SUPPORT!	METHOD OF ASSESSMENT 2	PROBABLE CAUSE OF IMPAIRMENT	MILES AFFECTED	COMMENTS	
Waterhouse Ditch	Albion	NS(Aquatic Life) FS(Recreational)	Monitored (c)	D.O. fron	1.7		
Oviatt Ditch	Rome City	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	2.7		
Oliver Lake Outlet Tributary	Eddy	FS(Aquatic Life) FS(Recreational)	Monitored (c)		1.5		
North Branch Elkhart River	Eddy	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	5.8		
North Branch Elkhart River	Cosperville	FS(Aquatic Life) NS(Reegeational)	Monitored (c)	E. Coli	5.1		
North Branch Elkhart River	Cosperville	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	6.1		
Tributary to Jones Lake	Rome City	FS(Aquatic Life) FS(Recreational)	Monitored (c)		5.0		
Branch from Little Lake to Lake Jones	Rome City	FS(Aquatic Life) FS(Recreational)	Monitored (c)		3.4		
Gretzinger Ditch	Brimfield	FS(Aquatic Life) FS(Recreational)	Monitored (c)		4.1	Insignificant flow. Bordered by farmland	
Tributary from Munk Lake to Clock Creek	Brimfield	FS(Aquatic Life) FS(Recreational)	Monitored (c)		1.9		
Clock Creek	Brimfield	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	2.65	Marsh/muddy conditions.	
Dry Run	Brimfield	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	6.0		
Boyd Ditch	Cosperville	FS(Aquatic Life) NS(Recrestional)	Monitored (c)	E. coli	1		
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Waters assessed, status of designated use support, probable causes of impairment, and miles affected in the Lake Michigan Basin -Northeast (cont.) Table 27.

WATERBODY	NEAREST TOWN(S)	STATUS OF DESIGNATED USE SUPPORT 1	METHOD OF ASSESSMENT 2	PROBABLE CAUSE OF IMPAIRMENT	MILES AFFECTED	COMMENTS
Huston Ditch	Wawaka	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	7.2	
Jacobs Ditch	Cosperville	FS(Aquatic Life) PS(Recreational)	Monitored (c)		3.0	
Thumma-Rousch Ditch	Bakerstown	FS(Aquatic Life) FS(Recreational)	Monitored (c)		6.0	
Forker Creek	Burr Oak	FS(Aquatic Life) NS(Recrestional)	Monitored (c)	E. coli	1.36	Occasional low D.O. due to heavy duckweed cover in areas.
Brown Ditch/Parker Ditch	Burr Oak	FS(Aqual v. Life) FS(Recressional)	Monitored (c)		6.6	
Winebreemer Branch	Меттіат	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	6.0	
Carrol Creek	Wolflake	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	3.0	
South Branch Elkhart River	Albion	FS(Aquatic Life) FS(Recreational)	Monitored (c)		1.9	
South Branch Elkhart River	Albion	FS(Aquatic Life) FS(Recreational)	Monitored (c)		6'1	
South Branch Elkhart River	Albion	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	1.9	
South Branch Elkhart River	Wawaka	FS(Aquatic Life) FS(Recreational)	Monitored (c)		13.2	Some low D.O. values due to Marshland.
Rimmell Branch	Bakertown	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	7.3	
Croft Ditch	Albion	FS(Aquatic Life) (Threatened) NS(Recreational)	Monitored (c)	D.O. Ammonia E. coli	1.7	
Croft Ditch	Albion	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	5.7	Heavy algae growth.

Waters assessed, status of designated use support, probable causes of impairment, and miles affected in the Lake Michigan Basin Northeast (cont.) Table 27.

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WATERBODY	NEAREST TOWN(S)	STATUS OF DESIGNATED USE SUPPORT 1	METHOD OF ASSESSMENT 2	PROBABI.E CAUSE OF IMPAIRMENT	MILES AFFECTED	COMMENTS
Long Ditch	Albion	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	4.0	
Tributary from Lower Long Lake	Port Mitchell	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	2.4	
Elkhart River	Ligonier	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	2.75	Variety of fish found; bass, pike bluegill, etc.
Elkhurt River	Ligonier	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	2.2	
Elkhart River	Goshen	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	10.0	
Elkhart River	Goshen	FS(Aquatic Life) (Threatened) FS(Recreational)	Monitored (c)		7	
Eaton Creek	Fremont	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	4.4	
Unnamed tributary from Fremont STP	Fremont	NS(Aquajic Life) FS(Recreational)	Monitored (c)	pH Chlorides Copper	3.0	
Toll Road Rest Stop Tributary	Fremont	FS(Aquatic Life) FS(Recreational)	Monitored (c)		1.0	
Follette Creek	Jamestown	FS(Aquatic Life) FS(Recreational)	Monitored (c)		,03	
Follette Creek	Glen Eden	FS(Aquatic Life) FS(Recreational)	Monitored (c)		2.2	
Unnamed tributary from Walters Lake	Angola	FS(Aquatic Life) FS(Recreational)	Monitored (c)		3.6	
Crooked Creek	Jamestown	FS(Aquatic Life) FS(Recreational)	Monitored (c)		- 71	
Crooked Creek	Nevada Mills	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E.coli	3.7	
Crooked Creek from Tamarack Lake	Orland	FS(Aquatic Life) FS(Recreational)	Monitored (c)		1.3	

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Waters assessed, status of designated use support, probable causes of impairment, and miles affected in the Lake Michigan Basin Northeast (cont.) Table 27.

WATERBODY	NEAREST TOWN(S)	STATUS OF DESIGNATED USE SUPPORT 1	METHOD OF ASSESSMENT 2	PROBABLE CAUSE OF IMPAIRMENT	MILES AFFECTED	COMMENTS
Bell Lake Ditch	Nevada Mills	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	2.4	
Unnamed tributary from Linie Lake	Nevada Mills	FS(Aquatic Life) FS(Recreational)	Monitored (c)		1.5	
Orland Tributary	Orland	NS(Aquatic Life) NS(Recreational)	Monitored (c)	Low D.O, E. coli	1.0	
Fawn River from Fawn River Fish Hatchery	Orcentield Mills	FS(Aquatic Life) FS(Recreational)	Monitored (c)		- 89. - 80.	
South tributary to Lake James	Crooked Lake	FS(Aquatic Life) NS(Recreutional)	Monitored (c)	E. coli	0.4	
Lake James/Lake Jimmerson Channel	Lake James	FS(Aquat'o Life) FS(Recrestional)	Monitored (c)			
Ditch to Little Center Lake	Angola	FS(Aquat'c Life) NS(Recressional)	Monitored (c)	E. coli	1.5	Metals in sediment. Dana Corporation effluent discharges into this ditch.
East tributary to Crooked Lake	Glen Eden	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	1.9	
Southeast tributary to Crooked Lake	Crooked Lake	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	1.7	E. coli counts of 940/100 ml.
South tributary to Crooked Lake	Crooked Lake	PS(Aquatic Life) PS(Recreational)	Monitored (c)	E. coli	- 1:1	
Tributary between the Third Basin of Crooked Lake and Lake Loon	Ivemess	FS(Aquatic Life) FS(Recreational)	Monitored (c)		1.4	
Lake Gage/Lime Lake Channel	Panama	FS(Aquatic Life) FS(Recreational)	Monitored (c)		0.3	
Pigeon Creek	Angola	FS(Aquatic Life) FS(Recreational)	Monitored (c)		8.0	
Pigeon Creek from Pigeon Lake	Angola	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	5.0	E. coli counts of 420/100 ml.

Waters assessed, status of designated use support, probable causes of impairment, and miles affected in Lake Michigan Basin
-Northeast (cont.) Table 27.

	COMMENTS	Continuation of problems with arranonia and E. coli from Mud Creek. Also poor treatment from Angola STP.					/100 m1.		ngola STP.	con Creek Rest. Area.				
	СОМ	Continuation of proble E. coli from Mud Cree from Angola STP.					E. coli counts of 1600/100 ml.		Poor treatment from Angola STP	Impairments from Pigeon Creek Rest. Area.				
	MILES AFFECTED	1.5	1.5	1.3	5.4	2.6	2.6	3.9	3.0	5,7	0'1	97	5.9	12.3
	PROBABLE CAUSE OF IMPAIRMENT	Ammonia E. coli					E.coli	<u>E. voli</u> D.O.	Ammonia Low D.O. E. coli	E. coli TSS Low D.O. Ammonia		E. coli	E. coli	
	METHOD OF ASSESSMENT 2	Monitored (c)	Monitored (c)	Monitored (c)	Monitored (c)	Monitored (c)	Monitored (c)	Monitored (c)	Monitored (o)	Monitored (c)	Monitored (c)	Monitored(b) (c)	Monitored (b)	Monitored (c)
~1	SATUS OF DESIGNATED USE SUPPORT 1	NS(Aquatic Life) NS(Recreational)	FS(Aquatic Life) FS(Recreational)	FS(Aquatic Life) FS(Recreational)	FS(Aquatic Life) FS(Recreational)	FS(Aquatic Life) FS(Recreational)	FS(Aquatic Life) NS(Recreational)	PS(Aquatic Life) NS(Recreational)	NS(Aquatic Life) NS(Recreational)	NS(Aquatic Life) NS(Recreational)	FS(Aquatic Life) FS(Recreational)	FS(Aquatic Life) NS(Recreational)	FS(Aquatic Life) NS(Recreational)	FS(Aquatic Life) FS(Recreational)
	NEAREST TOWN(S)	Angola	Pleasant Lake	Angola	Flint	Flint	Angola	Berlin	Angola	Hudson	Bristol	Bristol	Elkhart	Elkhart
	WATERBODY	Pigeon Creek from Mud Creek	Pigeon Creek from CR 400	Pigeon Creek from Golden Lake	Pigeon Creek from Hogback Lake	Pigeon Creek from Otter Lake	Ewing Ditch	Berlin Court Ditch	Mud Creek from Angola STP Discharge	Johnson Ditch	Trout Creek	St. Joseph River	St. Joseph River	St. Joseph River

Waters assessed, status of designated use support, probable causes of impairment, and miles affected in the Lake Michigan Basin-Northeast (cont.) Table 27.

WATERBODY	NEAREST TOWN(S)	STATUS OF DESIGNATED USE SUPPORT 1	METHOD OF ASSESSMENT 2	PROBABLE CAUSE OF IMPAIRMENT	MILES AFFECTED	COMMENTS
St. Joseph River	Mishawaka	FS (Aquatic Life) NS(Recreational)	Monitored (c)	PCB's E. coli	3.2	Salmonid classification.
St. Joseph River	South Bend	FS(Aquatic Life) NS(Recreational)	Monitored (c)	PCB's E. coli	2.6	
Sheep Creek	Bristof	FS(Aquatic Life) NS(Rec. cational)	Monitored (c)	E. coli	8.0	
Pine Creek	Bristol	FS(Aquefre Life) NS(Recrestional)	Monitored (c)	E. coli	18.0	
Peterbaugh Creek	Elkhart	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	6.0	
Christianna Creek	Elkhart	FS(Aquatic Lifc) FS(Recreational)	Monitored (c)		6.0	
Osborn-Manning Ditch	Elkhart	PS(Aquatic Life)	Monitored (c)		3.8	
Cobus Creek	Elkhart	FS(Aquatic Life) FS(Recreational)	Monitored (c)		11.0	
Crawford Ditch	Elkhart	NS(Aquatic Life) NS(Recreational)	Monitored (c)	Metals Oil E. coli	.75	
Auten Ditch	South Bend	PS (Aquatic Life) NS(Recreational)	Monitored (c)	<u>E. coli</u> Ammonia	1.5	Impacts from two mobile home parks and Berliner-Maux industry.
Juday Creek	South Bend	FS(Aquatic Life)	Monitored'(c)		24.6	
Solomon Creek	Cromwell	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli Non point source	3.7	Cromwell STP adds to E. coli count.
Cromwell Ditch	Cromwell	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	6.7	Intermittent stream.

Waters assessed, status of destynated use support, probable causes of impairment, and miles affected in the Lake Michigan Basin-Northeast (cont.) Table 27.

WATERBODY	NEAREST TOWN(S)	STATUS OF DESIGNATED USE SUPPORT 1	METHOD OF ASSESSMENT 2	PROBABLE CAUSE OF IMPAIRMENT	MILES AFFECTED	COMMENTS
Meyer Ditch	Cromwell	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	50	Channelized drainage ditch with no point sources, but E. coli exceeds standard.
Stoney Creek	Millersburg	FS(Aquatic Life) FS(Recreational)	Monitored (c)		2	
Long Ditch/Dry Run	Millersburg	FS(Aquatic Life) FS(Recreational)	Monitored (c)		8.0	
Rock Run Creek and tributanes	Goshen	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	42.0	
Turkey Creek	Bushy Prairie	FS(Aquatic Life) FS(Recreational)	Monitored (c)		6.0	
Pigeon River	Mongo	FS(Aquatic Life) FS(Recreational)	Monitored (c)		2.3	
Pigeon River	Howe	FS(Aquatic Life) PS(Recreational)	Monitored (c)	E. coli	1.7	
Pigeon River	Scott	FS(Aquatic Life) NS(Recreational)	Monitor ed (c)	E. coli	6.0	
Pigeon River	Scott to State Line	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	3.0	
Fly Creek	LaGrange	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	10.1	
E. Fly Creek	LaGrange	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	7.8	
Rowe Ditch	Howe	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	2.3	
West Buck Creek	Valentine	NS(Aquatic Life) NS(Recreational)	Monitored (c)	Low D.O. E.coli	4.0	Low D.O. from lack of stream aeration after going through wetlands.

Waters assessed, status of designated use support, probable causes of impairment, and miles affected in the Lake Michigan Basin-Northeast (cont.) Table 27.

WATERBODY	NEAREST TOWN(S)	STATUS OF DESIGNATED USE SUPPORT 1	METHOD OF ASSESSMENT 2	PROBABLE CAUSE OF IMPAIRMENT	MILES AFFECTED	COMMENTS
Van Netta Ditch	Seyberts	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	2.0	
Page Ditch	Shipshewana	FS(Aquatic Life) NS(Recreational)	Monitored (c)	TSS E. coli	6.0	Impacts from Shipshewana Lake and STP.
Buck Creek	Seyberts	FS(Aquatic Life) FS(Recreational)	Monitored (c)	•	1.5	
Unnamed tributary	Shipshewana	NS(Aquatic Life) NS(Recreational)	Monitored (c)	Ammonia TSS D.O. E <u>. coli</u>	2.1	Impacts from Shipshewana STP.
Fawn River	Scott	FS(Aquatic Life) FS(Recicational)	Monitored (c)		6.5	
Wagner Ditch	Nappanee	FS(Aquitic Life) NS(Rec ational)	Monitored (c)	E. coli	1.5	
Nunemaker-Township Ditch	Nappance	FS(Aquátic Life) NS(Recreational)	Monitored (c)	E. coli	-1	
Rogers Ditch	Nappance	FS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli	1	
Mather's Ditch	Middlebury	NS(Aquatic Life) NS(Recreational)	Monitored (c)	E. coli D.O. Endrin	01	

1 PS -: Partial Support: NS = Non Support; FS = Full Support. If a use is not listed, it was not monitored or evaluated 2 b = biological; c = chemical.

### APPENDIX C

Potential Stakeholders in the St. Joseph-Lake Michigan Watershed

# Potential Stakeholders in the St. Joseph-Lake Michigan Watershed

#### **Dekalb County**

Dekalb County Soil and Water Conservation District 942 W 15<sup>th</sup> Street Auburn, IN 46706-2031 (219) 925-3710/925-5620

USDA-NRCS 942 W 15<sup>th</sup> Street Auburn, IN 46706-2031 (219) 925-3710

County Highway Garage 100 S Main Street Auburn, In 46706 (219) 925-1864

Dekalb County Extension 215 E 9<sup>th</sup> Street Suite 300 Auburn, IN 46706 (219) 925-2562

Dekalb County Planning Commission 301 S Union Street Auburn, IN 46706 (219) 925-1923

Dekalb County Health Department 215 E. Ninth, Suite 201 Auburn, IN 46706-2336 (219) 925-2220

Dekalb County Surveyor 110 S Main Street Auburn, IN 46706 (219) 925-2222

#### Elkhart County

Elkhart County Soil and Water Conservation District 17746-B County Road 34 Goshen, IN 46528-9261 (219) 533-4383

USDA-NRCS 17746-B County Road 34 Goshen, IN 46528-9261 (219) 533-4383

Goshen City Engineer 302 S 5<sup>th</sup> Street Goshen, IN 46528 (219) 534-2201

Goshen Mayor's Office 111 E Jefferson Street Goshen, IN 46528 (219) 533-9322

Goshen Planning/Zoning 302 S 5<sup>th</sup> Street Goshen, IN 46528 (219) 534-3600

Goshen Sewage Treatment Plant 1000 W Wilden Ave Goshen, IN 46528 (219) 534-4102

Goshen Water Treatment Plant 308 N 5<sup>th</sup> Street Goshen, IN 46528 (219) 534-5306

Elkhart County Commissioners 117 N 2<sup>nd</sup> Street Goshen, IN 46528 (219) 534-3541

Elkhart County Extension 17746 County Road 34 Goshen, IN 46528 (219) 533-0554

Elkhart County Highway Engineer 4230 Elkhart Road Goshen, IN 46256 (219) 875-3365

Elkhart County Health Department 117 N Second Street, Room 112 Goshen, IN 46526-3231 (219) 533-4431

#### **Kosciusko County**

Kosciusko County Health Department Courthouse Third Floor, Rm. 2 100 West Center Street Warsaw, IN 46580-2877 (219) 372-2349

Kosciusko County Soil and Water Conservation District 217 E Bell Drive Warsaw, IN 46580-9350 (219) 267-7445

USDA-NRCS 217 E Bell Drive Warsaw, IN 46580-9350 (219) 267-7445

Kosciusko Area Plan Commission 100 W Center Street Warsaw, IN 46580 (219) 372-2304

Kosciusko County Co-Op Ext Svc 100 W Center Street Warsaw, IN 46580 (219) 372-2340

Kosciusko County Commissioner 100 Center Street Warsaw, IN 46580 (219) 372-2433

Kosciusko County Surveyor 100 W Center Street Warsaw, IN 46580 (219) 372-2366

#### LaGrange County

LaGrange County Health Department 114 W Michigan Street LaGrange, IN 46761-1860 (219) 463-7832

LaGrange County Soil and Water Conservation District 910 S Detroit Street LaGrange, IN 46761-2235 (219) 4633166

USDA-NRCS 910 S Detroit Street LaGrange, IN 46761-2235 (219) 463-3166

LaGrange County Nature Center 114 W Michigan Street LaGrange, IN 46761 (219) 463-4022

LaGrange County Highway Engnr 300 E Factory Street LaGrange, IN 46761 (219) 463-3452

LaGrange County Commissioners 114 W Michigan Street LaGrange, IN 46761 (219) 463-2183

LaGrange County Surveyors Office 114 W Michigan Street LaGrange, IN 46761 (219) 463-2183

LaGrange Extension Agent 114 W Michigan Street LaGrange, IN 46761 (219) 463-7808

#### **Noble County**

Noble County Soil and Water Conservation District 100 E Park Drive Albion, IN 46701-9797 (219) 636-7682

USDA-NRCS 100 E. Park Drive Albion, IN 46701-9797 (219) 636-7682

Noble County Health Department 2090 N State Road 9, Suite C Albion, IN 46701-9566 (219) 636-2191

Noble County Commissioners 101 N Orange Street Albion, IN 46701 (219) 636-7877

Noble County Extension Agent 2090 N State Road 9, Suite D Albion, IN 46701 (219) 636-2111 Noble County Plan Commission 2090 N State Road 9, Suite A Albion, IN 46701 (219) 636-7217

Noble County Surveyor 2090 N State Road 9, Suite B Albion, IN 46701 (219) 636-2131

#### St. Joseph County

St. Joseph County Soil and Water Conservation District St. Joseph Co. Farm Bureau 60455 U.S. 31 South, Suite 4 South Bend, IN 46614-5137 (219) 291-7444

St. Joseph County Health Department County-City Building, Floor 8 227 W. Jefferson Blvd South, Bend, IN 46601-1870 (219) 235-9750

USDA-NRCS St. Joseph Co. Farm Bureau 60455 U.S. 31 South, Suite 4 South, Bend IN 46614-5137 (219) 291-7444

South Bend Mayor 227 W Jefferson Blvd # 1400 South Bend, IN 46601 (219) 235-9261

River Park Partnership Ctr 2214 Mishawaka Ave South Bend, IN 46615 (219) 282-2531

Roseland Town Board 200 Independence Dr South Bend, IN 46637 (219) 272-6485

South Bend Community Affairs 1400 County-City Building SouthBend, IN 46601 (219) 235-9951

South Bend Audubon Society P.O. Box 581 Mishawaka, IN 46546 (219) 243-8739

#### **Steuben County**

Steuben County Soil and Water Conservation District Peachtree Plaza 200 1220 N 200 W Angola, IN 46703-8901 (219) 665-3211

USDA-NRCS Peachtree Plaza 200 1120 N 200 W Angola, IN 46703-8901 (219) 665-3211

Steuben County Health Department 317 S Wayne Street, Suite 3-A Angola, IN 46703-1938 (219) 668-1000, ext 1500

The Nature Conservancy Northwest Indiana Office 2400 New York Ave, Suite 411 Whiting, IN 46934 (219) 473-4312

Great Lakes Program 8 S Michigan Ave Suite 2301 Chicago, IL 60603 (312) 759-8017

Southwestern Michigan Commission 185 E Main Street Suite 701 Benton Harbor, MI 49022 (616) 925-1137

Nature Conservancy of Michigan 2840 E Grand River Ave Suite 5 East Lansing, MI 48823 (517) 332-1741

Trout Unlimited 15498 Marshfield Road Hickory Corners, MI 49060 1-800-461-1235, code 37 rhchambe@ccm.tds.net

Indiana Lakes Management Society 207 Wayne Street, Suite B Angola, IN 46703 (219) 264-2883 http://www.nalms.org/ilms/index.htm Friends of the St. Jo River Association Inc. P.O. Box 354 Athens, MI 49011 (616) 729-5174 algs@net-link.net

Steuben County Lakes Council Inc. 207 South Wayne Street, Suite B Angola, IN 46703 (219) 665-1730

Crooked Lake Jeff Smith 3645 W Sycamore Rd Angola, IN 46703 (219) 833-4722

Lake Gage/Lime Lake Jim Kidd 60 Lane 185 Lake Gage Angola, In 46703 (219) 833-2205

Lake Syl-Van Dan Warner 480 Ln 250 Lake Gage Angola, IN 46703 (219) 833-4566

Jimmerson Lake Jim Horstman 20 Lane 150B Jimmerson Lake Angola, IN 46703 (219) 833-2133

Lake James Bill Thompson 2180 Lane 105 Lake James Angola, IN 46703 (219) 833-3198

Pine Canyon Lake John Morgner 100 Lane 100A Pine Canyon Angola, IN 46703 (219) 833-4790

Silver Lake Margaret Smith 887 S 355 W Angola, IN 46703 (219) 665-2974

West Otter Lake Helen Miller 280 Lane 250 West Otter Lake Angola, IN 46703 (219) 665-2937

Hogback Lake Bonnie Schoppman 155 Lane 100 Hogback Lake Angola, IN 46703 (219) 665-8256

Glynna Nosek Fish/Royer Lake Association 1490 S 505 E LaGrange, IN 46761

Robert Christen Witmer Lake 1675 E 765 S Wolcottville, IN 46795

Mike Martin Shipshewana Lake 3485 N 980 W Shipshewana, IN 46565

Loretta Purcell Oliver Lake Association 1160 E 455 S LaGrange, IN 46761

Kenneth Everett Big Turkey Lake Association 1175 Park Drive Turkey Lake LaGrange, IN 46761

Harlan Stull Little Turkey Lake 3215 S 1075 E LaGrange, IN 46761

Rex Pranger Adams Lake Association 5985 S 550 E Wolcottville, IN 46795

Rick Hart Westler Lake 0700 E 650 S Wolcottville, IN 46795

Thomas Rofkahr Dallas Lake P.O. Box 301 Wolcottville, IN 46795

David Mehas

6170 S 085 W Wolcottville, IN 46795

Donald Wingstrom 5 Lakes Cons. Club 0330 W 590 S Wolcottville, IN 46795

Randy Houser Atwood Lake 7055 S 020 E Wolcottville, IN 46795

M LaPlace Stone Lake 106 Stone Lake Middlebury, IN 46540

Leon Wolfe Pretty Lake 4570 S 930 E Wolcottville, IN 46795

Plainwell District Office Southern Lake MI Management Unit Michigan Department of Natural Resources 621 North 10<sup>th</sup> Street Plainwell, MI 49080-1004

Wawasee Conservancy Foundation P.O. Box 548 Syracuse, IN (219) 457-4549 HHarwood@aol.com

Izaak Walton League 54568 Maple Lane Ave South Bend, IN (219) 277-5715

Friends of Juday Creek 54568 Maple Lane Ave South Bend, IN (219) 277-5715

Upper St. Joe River Assoc. 21624 C.R. 10

C.L.E.A.N. 300051 C.R. 16 Elkhart, IN (219) 522-0184

Elkhart, IN

Elkhart Envirocorps

1201 So. Nappanee Elkhart, IN (219) 293-2572

St. Joseph River Basin Commission 227 W. Jefferson Blvd, Room 1120 South Bend, IN 46601-1830 (219) 287-1829 sjrbcplanr@aol.com

Water Watchers of Indiana John Rouch 10464 North Grove road Milford, IN 46542 (219) 658-9108 jrouch@npcc.net

Indiana Farm Bureau

P.O. Box 1290 Indianapolis, IN 46206-1290 (317) 692-7810

**Indiana Department of Environmental Management** 100 N. Senate Ave

P.O. Box 6015 Indianapolis, IN 46206-6015

IDEM Switchboard (317) 232-8603 or (800) 451-6027

Agricultural Liaison (317) 232-8587 Air Management (317) 233-0178 **Community Relations** (317) 233-6648 Compliance and Technical Assistance (317) 232-8172 Criminal Investigations (317) 232-8128 Enforcement (317) 233-5529 Environmental Response (317) 308-3017 Legal Counsel (317) 232-8493 Media and Communication Services (317) 232-8560

Pollution Prevention and Technical

Assistance (317) 232-8172

Solid and Hazardous

Waste Management (317) 233-3656

Water Management	(317) 232-8670	D	(015) 000 4055
		Division of Oil and Gas	(317) 232-4055
Indiana Department of Natural Re	esources	District Court D	(215) 222 4252
402 West Washington Street		Division of Outdoor Recreation	(317)-232-4070
Indianapolis, IN 46204-2748		D CD 11.	
IDAN EL LI D		Division of Public	(215) 222 1200
IDNR Field Representatives are local County SWCDs.	ited in the individual	Information and Education	(317) 232-4200
Division of Engineering	(317) 232-4150	Division of Reclamation	(317)-232-1547
	(317) 232-4130	Division of Safety and Training	(317) 232-4145
Division of Entomology			
and Plant Pathology	(317) 232-4120	Division of Soil Conservation	(317)-233-3870
D CE. 1 0 Maine	(217) 222 4000	D	
Division of Fish & Wildlife	(317) 232-4080	Division of State	(215) 222 4124
D' ' ' CE '	(217) 222 4105	Parks and Reservoirs	(317)-232-4124
Division of Forestry	(317)-232-4105	D	(217) 222 4160
5		Division of Water	(317)-232-4160
Division of Historic			
Preservation & Archaeology	(317) 232-1646	Indiana State Department of Healt	h
		2 North Meridian St.	
Division of Law Enforcement	(317) 232-4010	Indianapolis, IN 46204	
District of National Discourse	(217) 222 4052	(317) 233-1325	
Division of Nature Preserves	(317)-232-4052		

#### Indiana Natural Resources Conservation Service 6013 Lakeside Blvd Indianapolis. In 46278

Indianapolis, In 46278 (317) 290-3200

NRCS Field Representatives are located in the individual County SWCDs.

Wood-Land-Lakes RC & D 214 W. North Street Kendallville, IN 46755-1134 (219) 349-1433

#### U.S. EPA Region 5

77 West Jackson Blvd Chicago, IL 60604 (312) 353-2000 (800) 632-8431

U.S. Corps of Engineers South Bend Sub-Office 6910 N Grumwood Granger, IN 46530 (219) 277-6044

# APPENDIX D FUNDING SOURCES

#### **FUNDING SOURCES**

This listing of funding sources was derived from the November 1998 *Watershed Action Guide for Indiana*, which is available from the Watershed Management Section of IDEM.

#### FEDERAL CONSERVATION AND WATERSHED PROGRAMS

Environmental Protection Agency

#### Section 319, 604(b), and 104(b)3 Grants

Grants for conservation practices, water body assessment, watershed planning, and watershed projects. Available to non-profit or governmental entities. These monies, enabled by the Clean Water Act, are funneled through the Indiana Department of Environmental Management. For details see IDEM below.

U.S. Department of Agriculture (See county listings for local federal agency contacts.)

**EQIP**: Environmental Quality Incentive Program. Administered by the Natural Resources Conservation Service. Conservation cost-share program for implementing Best Management Practices, available to agricultural producers who agree to implement a whole-farm plan that addresses major resource concerns. Up to \$50,000 over a 5- to 10-year period. Some parts of the state are designated Conservation Priority Areas and receive a larger funding allotments.

**WRP**: Wetland Reserve Program. Administered by the Natural Resources Conservation Service. Easement and restoration program to restore agricultural production land to wetland. Easements may be for 10 years, 30 years, or permanent. Longer easements are preferred. Partnerships with other acquisition programs are encouraged. Restoration and legal costs are paid by NRCS. Landowner retains ownership of the property and may use the land in ways that do not interfere with wetland function and habitat, such as hunting, recreational development, and timber harvesting.

**CRP**: Conservation Reserve Program. Administered by the Farm Service Agency with technical assistance from NRCS. Conservation easements in certain critical areas on private property. Agricultural producers are eligible. Easements are for 10 or 15 years, depending on vegetative cover, and compensation payments are made yearly to replace income lost through not farming the land. Cost share is available for planting vegetative cover on restored areas.

**WHIP**: Wildlife Habitat Incentive Program. Administered by the Natural Resources Conservation Service. Cost share to restore habitat on previously farmed land. Private landowners who are agricultural producers are eligible. Cost share up to 75%, and contracts are for 10 years.

**FIP**: Forestry Incentive Program. Administered by the Natural Resources Conservation Service. Cost-share to assist forest management on private lands. Funds may be limited.

U.S. Fish & Wildlife Service

Partners for Wildlife: assistance for habitat restoration.

#### STATE CONSERVATION AND WATERSHED PROGRAMS

IDNR Division of Soil Conservation

LARE: Lake & River Enhancement Program. Funds diagnostic and feasibility studies in selected watersheds and cost-share programs through local Soil & Water Conservation Districts. Project oversight provided through county-based Resource Specialists and Lake & River Enhancement Watershed Coordinators. Funding requests for Watershed Land Treatment projects must come from Soil & Water Conservation Districts. If a proposed project area includes more than one district, the affected SWCDs should work together to develop an implementation plan. The SWCDs should then apply for the funding necessary to administer the watershed project. Before applying for funding, the SWCDs should contact the Lake & River Enhancement Coordinators to determine (1) the appropriate watershed to include in the project, (2) if the proposed project meets the eligibility criteria, and (3) if funding is available.

IDNR Division of Fish & Wildlife

**Classified Wildlife Habitat Program**: Incentive program to foster private wildlife habitat management through tax reduction and technical assistance. Landowners need 15 or more acres of habitat to be eligible. IDNR provides management plans and assistance through District Wildlife Managers. See county listings.

Wildlife Habitat Cost-share Program: Similar to above.

IDNR Division of Forestry

**Classified Forest Program**: Incentive program to foster private forest management through tax reduction and technical assistance. Landowners need 10 or more acres of woods to be eligible. IDNR provides management plans and assistance through District Foresters. (See county listings.)

**Classified Windbreak Act**: Establishment of windbreaks at least 450 feet long adjacent to tillable land. Provides tax incentive, technical assistance through IDNR District Foresters.

Forest Stewardship Program & Stewardship Incentives Program: Cost share and technical assistance to encourage responsibly managed and productive private forests.

Appalachian Clean Streams Initiative: Funds for acid mine drainage abatement.

IDNR Division of Nature Preserves

State Nature Preserve Dedication: Acquisition and management of threatened habitat.

IDEM Office of Water Management

**State Revolving Fund**: Available to municipalities and counties for facilities development. Will be available in 1999 for nonpoint source projects as well. Funding is through very low-interest loans.

**Section 319 Grants**: Available to nonprofit groups, municipalities, counties, and institutions for implementing water quality improvement projects that address nonpoint source pollution concerns. Twenty-five percent match is required, which may be cash or in-kind. Maximum grant amount is \$112,500. Projects are allowed two years for completion. Projects may be for land treatment through implementing Best Management Practices, for education, and for developing tools and applications for state-wide use.

Section 205(j) Grants, formerly called 604(b) Grants: Available to municipalities, counties, conservation districts, drainage districts. These are for water quality management projects such as studies of nonpoint pollution impacts, nonagricultural NPS mapping, and watershed management projects targeted to Northwest Indiana (including BMPs, wetland restoration, etc.)

**Section 104(b)(3) Grants**: These are watershed project grants for innovative demonstration projects to promote statewide watershed approaches for permitted discharges, development of storm water management plans by small municipalities, projects involving a watershed approach to municipal separate sewer systems, and projects that directly promote community based environmental protection. NOTE: the application time frame for IDEM grant programs is annually, by March 31<sup>st</sup>.

#### PRIVATE FUNDING SOURCES

National Fish and Wildlife Foundation

1120 Connecticut Avenue, NW Suite 900, Washington DC 20036. Nonprofit, established by Congress 1984, awards challenge grants for natural resource conservation. Federally appropriated funds are used to match private sector funds. Six program areas include wetland conservation, conservation education, fisheries, migratory bird conservation, conservation policy, and wildlife habitat.

#### Individual Utilities

Check local utilities such as IPALCO, CINergy, REMC, NIPSCO. Many have grants for educational and environmental purposes.

Indiana Hardwood Lumbermen's Association
Indiana Tree Farm Program

The Nature Conservancy

Land acquisition and restoration.

Southern Lake Michigan Conservation Initiative

Blue River Focus Area Fish Creek Focus Area Natural Areas Registry

Hoosier Landscapes Capitol Campaign

Conservation Technology Information Center (CTIC)

'Know Your Watershed' educational materials are available

Indiana Heritage Trust

Land acquisition programs

**Ducks Unlimited** 

Land acquisition and habitat restoration assistance

Quail Unlimited

Pheasants Forever

Sycamore Land Trust

Acres Inc.

Land trust

Oxbow, Inc.

Land trust

SOURCES OF ADDITIONAL FUNDING OPPORTUNITIES

#### Catalog of Federal Funding Sources for Watershed Protection EPA Office of Water (EPA841-B-97-008) September 1997

GrantsWeb: http://www.srainternational.org/cws/sra/resource.htm